INTERNATIONAL PACIFIC HALIBUT COMMISSION

Reports of the IPHC Scientific Review Board

Agenda Item 3.6

IPHC-2022-SRB020-R

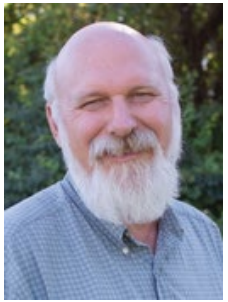
IPHC-2022-SRB021-R

SRB IN 2022

The SRB consisted of three (3) board members, required to be independent of the Contracting Parties

Dr. Sean Cox
SFU

May 2013-current
(9 years)



Dr. Kim Scribner
Mich. State U

July 2017-current
(5 years)

Dr. Olaf Jensen
U Wisc, Madison

June 2020-current
(3 years)

HIGHLIGHTS

- 20th Session of the IPHC Scientific Advisory Board (SRB020) was held from 14-16 June 2022

- 21th Session of the IPHC Scientific Advisory Board (SRB021) was held from 20-22 September 2022

SRB020 – *primarily focused on research*

SRB021 – *primarily focused on the FISS and the MSE results*

SRB020

ENDORSED FISS 2023

(PROVISIONALLY ENDORSED 2024 AND 2025 DESIGNS)

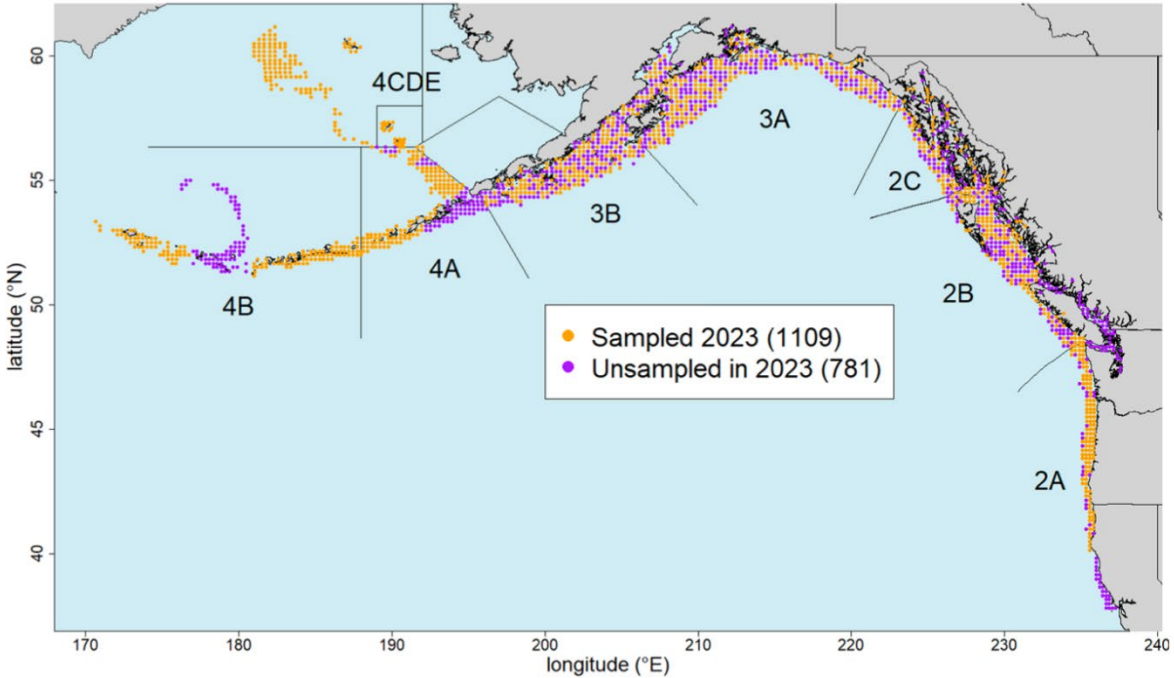


Figure 2. Proposed FISS design (pre-optimisation) in 2023 (orange circles) based on randomised sampling in 2B-3B, and a subarea design elsewhere. Purple circles are optional for meeting data quality criteria.

RECOMMENDATIONS

IPHC Fishery-independent setline survey (FISS)

SRB020–Rec.01(para. 11) **NOTING** that the coefficient of variation (CV) for IPHC Regulatory Area 4B exceeded the 15% threshold in 2021 because some stations could not be sampled for logistical reasons (in 2022 the issue is likely to persist due to non-viable bids (economic and logistical reasons)), which may continue into the foreseeable future, the SRB **RECOMMENDED** continuing to investigate potential means to mitigate these effects. For example, by increasing the pool of potential bidders by including vessel using snap-gear.

RECOMMENDATIONS

Pacific halibut stock assessment: 2022

SRB020–Rec.02 (para. 23) The SRB **NOTED** that most models within the ensemble produced reasonable and well-constrained estimates of natural mortality (M) and **RECOMMENDED** that estimation of M should be adopted in the short AAF assessment model with consideration in other models as part of the stock assessment research program.

SRB020–Rec.03 (para. 24) The SRB **NOTED** that the bootstrapping approach to determining maximum samples sizes for age-composition data improved assessment model performance and stability and, therefore, **RECOMMENDED** that the bootstrapping approach be adopted for data-weighting in future assessments.

SRB020–Rec.04 (para. 25) The SRB **NOTED** apparent discrepancies in marine mammal prevalence among anecdotal reports, FISS observations, and preliminary evaluation of logbook data, and therefore **RECOMMENDED** further investigation of methods to better estimate marine mammal prevalence and impacts on the fishery.

RECOMMENDATIONS

International Pacific Halibut Commission 5-year program of integrated research and monitoring (2022-26)

SRB020–Rec.05(para. 36) The SRB **NOTED** the exceptional level of transparency and commitment to the principles of open science represented by the Secretariat's data and code-sharing practices and, therefore, **RECOMMENDED** that the Secretariat consider producing peer-reviewed data report publications, which would (a) enhance outreach to potential external data users and (b) allow for tracking external use of IPHC data and resources.

REQUESTS

Management Strategy Evaluation: update

SRB020–Req.04 (para. 20) The SRB **REQUESTED** that the MSE not attempt to implement a Stock Synthesis estimation procedure as part of the management procedure and, instead, to integrate a simpler assessment modelling approach into the management procedure via tuning.

REQUESTS

Biological and ecosystem science program – Project updates

SRB017–Rec.02 (para. 31) **NOTING** the improved presentation of the research integration plan, the SRB **RECOMMENDED** that the research planning table shown in the meeting presentation for paper IPHC-2020-SRB017-08, be improved by adding clear prioritization of biological research needs for addressing uncertainties in the stock assessment and MSE programs. Ideally, this would be in the form of ranked biological uncertainties/parameters for the stock assessment and MSE operating model along with an explanation for deviations from this ranked list.

SRB021

RECOMMENDATIONS

International Pacific Halibut Commission 5-year program of integrated research and monitoring (2022-26)

SRB021–Rec.01(para. 14) The SRB **RECOMMENDED** that the Secretariat and Commission take a more deliberate and explicit approach in deciding which research programs to fund internally or externally, since internally funded research can: (i) utilize milestones and interim evaluations as possible "kill points" where a project may be discontinued if the marginal costs outweigh the benefits of a particular research stream or project; (ii) provide pilot data to support external research proposals; and (iii) support critical applied research that falls outside typical funding agency interests.

RECOMMENDATIONS

Management Strategy Evaluation: update

SRB021–Rec.05 (para. 26) **NOTING** the MSE results for size limit scenarios presented, the SRB **RECOMMENDED** further analysis of the economic implications of harvesting smaller fish (e.g. reduced yield and/or increased processing costs, changes in efficiency, and potential lower value for smaller fish).

SRB021–Rec.06 (para. 27) The SRB **RECOMMENDED** evaluating additional performance metrics including, for example, discard mortality and change in TCEY in assessment years for multi- year assessment MPs.

RECOMMENDATIONS

Pacific halibut stock assessment: 2022

SRB021–Rec.08 (para. 35) **NOTING** the integration between the stock assessment and biological research in evaluating the impact of genetic sex composition data (and the one-year lag in providing these data) on assessment results along with the resourcing implications, the SRB **RECOMMENDED** continued evaluation of the impact on stock assessment output of analyzing this genetic sex composition data on 1, 2, or 3 year intervals.

RECOMMENDATIONS

Biological and ecosystem sciences – Project updates

SRB021–Rec.15 (para. 51) The SRB **RECOMMENDED** that the Secretariat (i) develop a rapid screening panel of SNP markers (e.g. GTseq, RADcapture) for future use in Close-Kin Mark recapture (CKMR), population assignment, or other applications (CKMR applications may necessitate the development of microhaplotypes to achieve adequate accuracy in multi-generational pedigree analyses), and (ii) begin developing potential SNP panels and evaluate accuracy of population-based or pedigree-based assignment under scenarios likely to be encountered in future IPHC applications.

REQUESTS

Management Strategy Evaluation: update

SRB021–Req.02(para. 30) The SRB **REQUESTED** that the Secretariat examine MPs based on a three-year assessment cycle with annual TCEY changes proportional to changes in the FISS index because (i) this approach would be simpler and more transparent than a model, which has not yet been developed); (ii) the high benefit to cost ratio for multi-year TCEYs; (iii) it matches the current three-year full assessment cycle; and (iv) the general approach has precedents in other fishery commissions (e.g. Southern Bluefin Tuna).

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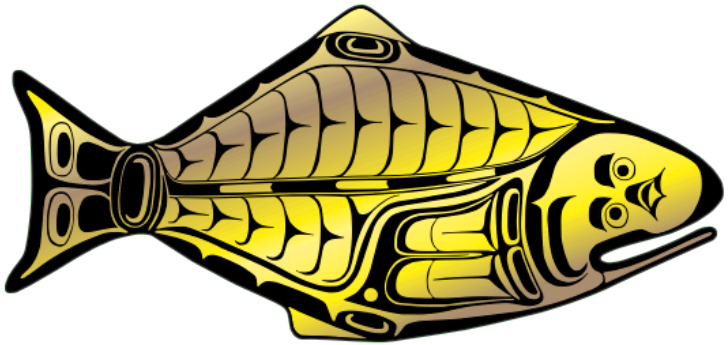

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